DOCUMENT RESUME

ED 049 485 CG 006 292

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TITLE The Student Group in Formal Education.
INSTITUTION American Educational Research Association, Washington, D.C.; North Carolina Univ., Chapel Hill.
PUB DATE Mar 70
NOTE 29p.; Paper presented at the American Educational Research Association Convention in Minneapolis, Minnesota, March 22-26, 1970

EDRS PRICE EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS Comprehensive High Schools, *Group Dynamics, Groups, *Heterogeneous Grouping, Homogeneous Grouping, Individual Differences, *Interaction, *Intergroup Relations, Models, *Student Grouping, Students, Teaching Methods

ABSTRACT

This paper discusses the use of student groups in formal education. A model is proposed which involves the development of student interdependence on common tasks, the use of group incentives which may be earned through competition with a standard or with other groups, and the exchange of student resources in teaching and learning. In contrast to the prevailing emphasis on similarity for grouping in schools and classrooms, it is argued that individual differences in age, skills, and socio-cultural experiences should be thought of as resources for exchange in student relationships. Such resources represent a potential basis for a division of labor and student teaching in the student collective. Some issues associated with student heterogeneity and relationships in comprehensive schools are explored. Student similarity and differences as a basis for groups are evaluated with emphasis on their consequences for intellectual growth, student solidarity, and conflict. In the final portion of the essay conditions which are supportive of an equitable student exchange are described. (RSM/Author)

ED049485

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The Student Group in Formal Education

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Prepared for presentation at the American Educational Research Association meetings, March 2-5, 1970, Minneapolis, Minnesota

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The Student Group in Formal Education

In the search for educational models responsive to the varied talents and social experiences of students, much attention has been devoted to the teacher's role and its variations, the counselor-tutor, specialist (as in team teaching arrangements), and coordinator of varied human resources in the classroom.[1] While pressures have increased for greater student participation and influence on curriculum matters, a common posture of the teacher remains that of a distant authority figure and dispenser of knowledge in the classroom. As members of a subject society, American students on the secondary level have negligible influence on academic matters, and the situation is more restrictive in English grammar schools;"--for the most part, young people who are still at school [grammar] are living under a benevolent autocracy" (Richardson, 1967:4).

When teaching is equated with what the teacher does, or at least a major component of it, student contributions in the classroom are likely to be appraised in terms of their effect on this activity. The problem is to provide the kinds of students or classroom arrangements that facilitate teacher effectiveness, however defined. These arrangements may include group discussion, authoritarian or democratic relations between teacher and students. A suitable classroom size, minimal diversity among students on attributes considered important for the particular course, and the selection of students who are considered most teachable by the teacher (cf. Thelen, 1967) are relevant issues. In the words of Goodlad and Anderson, "A group of thirty pupils grouped homogeneously would be a teaching Utopia" for many teachers (1959:17).

Discussions of classroom organization and teaching which center on the dominant role of the teacher largely ignore instructional alternatives which involve student exchange in teaching-learning relationships. Student interaction, values, and groups are viewed more in terms of their impact on teacher effectiveness than as potential educational resources of intrinsic merit. Negligible attention

has centered on the conditions which facilitate educative transactions between students, on the tasks, student resources, and incentives which promote student exchange. Despite countless reviews of research and theory on teaching in the past decade (cf. Gage, 1963), it is difficult to find any thorough elaboration of models which offer student groups a responsible, relatively autonomous role in formal education.

Such involvement faces stiff opposition from some teachers who believe that a program which encourages student interaction invites classroom disorder. Collective behavior processes--interstimulation, circular reaction, and milling--are the anticipated consequences of this opportunity. Student behavior somehow loses its predictability and rationality from the school's standpoint. Classroom observations suggest that teachers who adhere to these views may consciously use lectures as a form of crowd or classroom control; the more teacher talks, the less students will be able to communicate with each other. Classroom disorder obviously involves student interaction, although much student interaction is and can be orderly, even by the most restrictive standards. The deliberate use of student groups means that not all teaching is carried on by the teacher, but this does not necessarily lessen the teacher's effectiveness in class control. Such control can be exercised by defining group tasks, by establishing and allocating rewards for cooperative activity, and by assigning students to particular groups.

Student groups are accorded legitimate status by school officials in social and athletic life, but these activities are tellingly described as extra-curricular--as outside the primary curriculum of the school--and are generally closely supervised or regulated by teachers. Nevertheless, student achievements in these areas are highly valued by peers, more so perhaps than academic competence.

A plausible explanation for their lofty prestige is that students who make contributions to the school's social life or athletic program serve and honor the student collectivity and in so doing also improve their status among classmates (Coleman, 1959). On the other hand, a stellar academic performance benefits primarily the individual student, typically at the expense of less successful classmates, when fixed rewards (a specified number of A's, B's, etc.) are allocated on the basis of relative performance. Under conditions of zero-sum rewarding, students who exchange information and work together in studying for examinations risk losing their advantage in the competition for high grades (see Selby and Woods, 1966). Homogeneous grouping on age and ability could also increase competitive pressures and an unwillingness to cooperate; rivalry is maximized when students are relatively similar on relevant status characteristics. In the non-selective setting of the high school, the punishing effects of individual achievement on other students may generate norms which effectively discourage such prominence (Coleman, 1959).

From thirty years of sociometric studies[3] and a growing body of knowledge on the effects of school and classroom composition, one conclusion stands out--that peer groups, naturally formed out of common interests and contiguity, have a very substantial effect on the quality or effectiveness of a school's academic program and on student performance. Though much of this influence tends to undermine the best efforts of teachers, recent studies have shown that the quality of the student body--defined in terms of educational background, resources, and goals--is a major determinant of student performance in the school (see Coleman et. al., 1966). This effect occurs mainly through close friends and classmates (McPartland, 1969), although very little is known about actual processes of student interaction, such as how one student influences another and the conditions which sustain the relationship. Even more important is the question of how to

include student groups in the process of formal education. As Boocock observes, "the best thing to do with such a potentially powerful force is to use it, and the search for areas of agreement between youth and adult culture and for methods of teaching that retain the structure and channel the energies of student friendship groups seems a very fruitful kind of research." (1966:31). Deliberate use of the peer group is a central principle in Soviet education, and in this respect it is noteworthy that experimental studies have found peers to be more supportive of adult standards among Soviet children than among American youngsters (Bronfenbrenner, 1967:1969).

As one approach to the deliberate use of student groups in formal education, I shall propose a model which involves the development of student interdependence on common tasks (responses of all members are required to complete the task), the use of group incentives which may be earned through competition with a standard or with other groups, and the exchange of student resources in teaching and learning. As will be seen, this use of the student group enables intellectual growth and autonomy, as well as cooperation and contributions to others; both individual achievement and cooperative activity are rewarded. This procedure has no kinship with the bland social adjustment philosophy of the 1930's.[4] The kind of educative interaction we have in mind bears some resemblance to Dewey's concept of conjoint activity (1944), though we shall emphasize its consequence for developing respect for individual differences, instead of its assimilative effects. Dewey was also vague on the conditions which make interaction between different individuals attractive. George Herbert Mead's discussion of role taking and playing, of coordination and adjustments in fitting lines of action together, is also germane to our consideration of educative interaction between students.

In contrast to the prevailing emphasis on <u>similarity</u> as a basis for grouping in schools and classrooms, I shall argue that individual <u>differences</u> in age,

skills (in the various subjects, in work, athletics, and social activities), and socio-cultural experiences should be thought of as resources for exchange in student relationships. Such resources represent a potential basis for a division of labor and student teaching in the student collective. Out of such interaction may develop a greater sense of interpersonal trust and acceptance, and of respect for differing values and qualities. A common example of the use of student differences in the educational process is the tutorial involving youth who vary in IQ, academic performance, or age. In our view, student teaching is a transactional process in which mentor and learner are simultaneously influenced or socialized.

In what follows, I shall first explore some issues associated with student heterogeneity and relationships in comprehensive schools, and evaluate student similarity and differences as bases of student groups, with emphasis on their consequences for intellectual growth, student solidarity, and conflict. In the last half of the essay, I shall describe in detail conditions which are supportive of an equitable student exchange--the nature of the task, incentives, and resources for exchange.

Student Heterogeneity and Relationships

There are two faces to American public education. From one vantage point, our schools are described as performing the unique function of assembling children with varied talents and customs in a common setting. Countering this assertion is our knowledge of conditions or policies which have minimized interaction between students of differing background and aptitude. Student input has been restricted along cultural and racial lines by subgroup segregation, intergroup antipathy, and parental ethnocentrism. Even in the early days of public education, the common school "thrived best where there was already a reasonable homogeneity of race, class, and religion, and where communities were not so large as to prevent the development of substantially dissimilar ghettos" (Cremin, 1965:63).

Within the schools, pressure to minimize student heterogeneity and to regard student differences as a problem has stemmed from assimilation objectives and the requirements of a heavily teacher-centered model of instruction, such as a relatively homogeneous class.

Emphasis on Anglo conformity[5] in civic socialization and academic instruction has tended to alienate many children from diverse social and cultural communities. Instead of fostering student respect for differing cultural traditions, public schools have imposed unilateral demands on minority children which derrogate their way of life and define school success by middle-class, Anglo standards (see Wax, et. al., 1964). When a teacher subscribes to Anglo conformity, there is no motive for establishing a rewarding climate in which a minority student can make a valuable contribution to educational activity by sharing his cultural experience and viewpoint with students from other communities. Moreover, meaningful teaching opportunities for minority or working-class students are not consistent with this standard. "One doesn't give a platform to students who represent the undesirable."

Age[6] and skill grouping express the greater division of labor between teachers and students which has resulted from the increasing complexity of the educational task and number of students. Organizational complexity is related to size, and the practice of student grouping by age and ability is related to school size (see Council on Education, 1967:226). By design, these modes of student differentiation and segregation service an instructional model in which the teaching function is restricted to the teacher. A class of thirty or more students who vary widely on aptitude and experience presents obvious problems for effective teaching and meeting the learning needs of all students. If age grading and ability grouping are beneficial to the teacher, as some evidence suggests, there is no conclusive evidence that it improves student learning.[7] A recent review of studies on ability grouping concludes that "despite its

increasing popularity, there is a notable lack of empirical evidence to support the use of ability groups as an institutional arrangement in the public schools" (NEA, 1968:44; see also Yates, 1969). In any case, ability grouping is likely to create negative and positive reference groups, produce student contra-cultures, and increase the impact of social origin on status placement. Homogeneous grouping reduces the range of social experiences and exchange, which in itself can be viewed as a sizable cost to learning. "Diversity of stimulation means novelty, and novelty means challenge to thought" (Dewey, 1944:84).

Given a teacher-restricted form of instruction, the problems inherent in a heterogeneous student body are such that one might be tempted to explore alternatives to the comprehensive school, even though support for this educational ideal runs deep in American society. It would not be difficult to argue convincingly that the specialization trend in society is in direct conflict with the open-door policy and diverse educational programs of the comprehensive school. Ronald Corwin has attempted to do just this, but his proposed alternative leaves much to be desired (1965:140-149). He argues that the non-specialized comprehensive school is an anomaly in our complex, differentiated society, and that its intellectual functions are undermined by multiple goals," ranging from teaching knowledge to teaching character training," and student heterogeneity. The alternative favored by Corwin is a specialized system of schools which closely resembles the discredited tri-partite educational system of England. "The specialized system is predicated on the assumption that motivating lower-class students and teaching scholastically oriented students are distinct problems, each of which demands different resources, teaching skills, curriculums, and methods" (1965:141). Each school would admit students who achieve similar scores on tests of motivation to succeed in school and on scholastic aptitude. Thus one school would be set up for the highly talented students, another for the under-motivated, high achievers, and so forth. This system is most improbable in a

society which is sensitive to its creed of equal opportunity for all young people, regardless of race, class, or creed, and to its failings on this standard. Yet if implemented it would multiple many times the adverse effects of ability grouping in strengthening the link between family origin and future status. The English experience with secondary modern and grammar schools is chastening in this respect.

A major structural condition underlying these adaptations to the problem of student heterogeneity is the exclusive assignment of the teaching function to the adult teacher. What little authority is delegated to the classroom is vested in the teacher, so that any student interaction readily becomes an apparent threat to the teacher's competence in maintaining order. The stronger the link between teaching and the adult teacher, the less student teaching and exchange will be viewed as a valuable aspect of educational activity, and the more insistent the pressure toward homogeneity in the classroom. Though one may grant that organized formal education requires the firm presence of an adult teacher, reasonable limits on student variation, and sensitivity to individual differences among students, this focus is not likely to direct attention to the ways by which student groups can be systematically involved in the educational process.

Instead of ruling out the educational value of student heterogeneity, by evaluating it against the requirements of teacher specialization, we might consider ways to effectively use this variation in education. Instead of focusing exclusively on how students might be grouped in order to increase teacher effectiveness, and its assumed benefit for pupil learning, we might explore arrangements which assign a significant teaching function to student groups. One such arrangement involves a division of labor within the student collective based on the varied resources which students bring to the classroom--their age-related experience, aptitudes in various areas, and socio-cultural experience. For instance, black and white students have much to exchange in civics and American history from

their own experience, understandings, and definitions, especially if appreciation and support are provided by the teacher. Teaching opportunities could also be established by forming groups which vary on student aptitude or age.[8] Tutorials based on ability or age differences are common in school systems throughout the country, but they have typically included only a small fraction of the students. In effect, they generally represent only patchwork responses to individual differences which do not challenge traditional modes of school organization and curriculum. As a rule, attempts to establish curricula which are responsive to differences among students--such as the nongraded school--have not recognized the potential value of these differences for educative exchange among students. By viewing individual differences solely in relation to the student-teacher relationship, we have missed their implications for student efforts in formal education. Full use of student groups in the educational process will require fundamental change in authority relations and norms which structure teaching.

When student groups are formed on the basis of personal choice in a school which practices homogeneous grouping, similarity is clearly favored as the basis for student relationships. In terms of Newcomb's model of interpersonal attraction, "people are most likely to interact (and thus, in terms of probabilities, to develop close relationships) when shared interest in some aspect of their common environment brings them together" (1966:9). The structure of comprehensive schools and results from countless sociometric studies give persuasive support to the belief that "likeness" is the basis of student solidarity. However, the division of labor is another equally important source of solidarity.

The idea that social solidarity develops out of both interdependence on tasks and likeness is of course the major theoretical contribution of Durkheim's The Division of Labor in Society. The division of labor or exchange

on a task "unites at the same time that it opposes; it makes the activities it differentiates converge; it brings together those it separates" (1964:276). Students who are assigned by their teacher to a common task may have little in common at the beginning except a desire to achieve rewards that are contingent on cooperative effort and successful group performance, although mutual respect is likely to develop out of their transactions. In a significant experiment, Breer and Locke (1965) obtained substantial change toward favorable attitudes on cooperation among college students who were exposed to a set of tasks which were known to be more effectively performed by cooperative activity.

An interdependent task to which children are assigned is recognized as an essential aspect of situations which are most likely to produce interracial acceptance. In summarizing research on this topic, Trubowitz cites the following situational conditions as most supportive of positive attitude change (1969:vii): 1) compels contact among the participants; 2) enables the participants to focus on concrete tasks requiring common effort; 3) promotes opportunity for the individuals to interact on a personal basis; 4) places individuals in positions of social equality; and 5) establishes a social norm of friendly interracial relations.

In any team effort involving students who differ in personal and social characteristics, there are bound to be misunderstandings, arguments, and even heated conflicts. This is especially true of the initial phase of group activity, when members attempt to fit their lines of action together, to adjust and coordinate their responses, since status dissimilarity tends to diminish role taking accuracy. However, within reasonable limits, conflicts in social interaction do provide a vital stimulus for cognitive and interpersonal growth, a point repeatedly made by Jean Piaget. Interpersonal conflicts heighten self-consciousness and an awareness of others. Aside from coordination and adjustment problems, the likelihood of interpersonal conflict is influenced by the

nature of the common task and the pattern of reward allocation. Though not recognized by Durkheim, task interdependence is likely to produce competition, conflict, and interference between group members when they do not share equally in the outcomes of group performance (Miller and Hamblin, 1963).

In my concluding remarks, I shall outline basic elements of a program which utilizes student exchange on educational tasks. This program does not alter the conventional practice of rewarding students according to their individual performance; the more outstanding the individual performance, the higher the reward. However, the negative zero-sum consequences of inter-student competition are minimized by establishing a situation in which the reward distribution is not fixed and the student competes against a comparable pupil from another classroom. In addition, cooperative activity is explicitly rewarded. Students have much to gain and risk very little in working with other students. By this procedure, which is spelled out more explicitly in what follows, we aim to promote individual achievement through autonomous work and exchange, to minimize the costs of differential achievement and rewarding for the student collective, and to ensure that student exchange and teaching are valued activities. Though we have stressed the utility of appropriate student heterogeneity as a basis for student exchange, there is no reason why aspects of the following program could not be employed in a presumably homogeneous classroom. Individual differences are such that a completely homogeneous class on background and aptitudes is most unlikely.

Student Variation and Exchange

Some heterogeneity in a classroom provides at minimum an opportunity for the teacher to use the variety of student resources in organizing student groups on common tasks. Theoretically, the teacher's response to this opportunity may vary from no program development, such as in many nongraded classrooms;

to partial direction where, for instance, students may be rewarded for participation in cooperative study sessions, but are permitted to choose whomever they want to study with; to a thoroughly planned program for student exchange which specifies the academic tasks, reward allocation for group performance, and student assignment to groups. Students may decide with their teacher on particular group tasks and rewards, and this may take the form of genuine conjoint planning, but the organization of student involvement and group assignments remains the primary responsibility of the teacher. As will be seen, the assurance of fair conditions for exchange largely hinges on how this task is handled. A program without wholehearted support from classroom teachers is in trouble, especially when student interaction is implicitly equated with disruption and a heavier burden.

The teacher who gives little thought or structure to the involvement of student groups on educational tasks is likely to have minimal positive influence on the formation and effects of groups that form in the classroom. And since shared interest are generally correlated with status similarity, pupils in the setting are likely to form groups which are relatively homogeneous on primary status characteristics. The class may be desegregated, but this does not assure the development of interracial friendships. The initiation of cooperation among students who differ in talent or background requires more than simple propinquity.

In the absence of explicit support for and directions of student exchange, natural conditions in the classroom such as shared interests may be sufficient to encourage interaction between older and younger, bright and less capable students. This condition was found in a recent study of an adult-youth high school (Elder, 1967). A third of the students were adolescents. Informal patterns of exchange were not purposefully designed or structured by the staff or administration, although they were in favor of such interaction. Competition

between students was minimized by grading practices which stressed individual gains in achievement or progress rather than relative performance. Most of the teachers used the lecture method sparingly, thus allowing for spontaneous student interaction. An initial basis for cross-age attraction through common interests was provided by the common educational task, and by the similar class background and educational experience of the older and younger students (working class and lack of a high school diploma). Primary relations between members of each age group were relatively common: four-fifths of the adolescents reported that they had at least one adult friend. The most important determinant of cross-age interaction was the variety of resources and rewards which members of each group had for exchange--encouragement, approval, experiences, information, assistance, and the like. While the inter-age relationship generally centered on the common educational task, issues of common concern broadened to include other problems, such as pregnancy, the law, job-hunting, and parental problems.

The initial contact between members of each age group involved both requests for and offers of academic assistance. Relatively few adults reported no receipt or offer of academic help, and a majority felt that this form of exchange had been most beneficial to them, both socially and in terms of their academic progress. More than three-fourths of the adolescents reported that they had received help from adults on school problems as well as on problems of a more personal nature. At times, this helping relationship filled a need not met by the teacher. The differing attitudes, ideas, and experiences of the older and younger students tended to make class discussions interesting and informative. Such comments as "you can learn more from adults because of the ideas they express" and they "discuss things you don't even know" suggest that interaction between age groups provided the younger student with a better understanding of older people and of the social responsibilities and opportunities in the next age grade. The family status of the adult students influenced their attitude

toward interaction with the younger students. Adults with children living at home were most positive toward such interaction; it provided them with a deeper understanding of the problems of young people, and they felt that this insight had increased their effectiveness as parents. During the course of the study, conflicts did occur between the adults and adolescents; however, they were much less frequent or serious than those which occured between the younger students.

As noted, cross-age interaction in this school was an unplanned development The teachers did not set up small discussion groups to use the differing resources of the older and younger students. In no class were the adults explicitly paired with the adolescents in study groups and inter-age cooperative activity was not singled out for rewards by the school staff. Nothing was done to ensure that the inter-age groups maintained high academic standards, although this outcome was a natural by-product of the industry and commitment of the adults. Considering these deficiencies, and the kinds of relationships which developed between older and younger students, one wonders about the full potential of the inter-age school for educative relations between members of each age group.

Let us move now to a program explicitly arranged for exchange between students who differ in status characteristics and resources. In this program we start with a given task which involves interdependence among the co-workers and with students who may have little in common other than an interest in the successful completion of the group project, as motivated by group rewards. The teacher's allocation of pupils to a group is based not on knowledge of friendship ties or similarity of age, aptitude, or background, but on criteria which will provide resources for a division of labor and cooperative activity. Trust, respect, and acceptance are viewed as a potential outcome rather than as a requisite for group formation. Respect for the individual strengths and qualities of each student is preferred as an objective, as against student

uniformity and assimilation. The classroom teacher assumes a leading role in setting up and managing the program; in establishing the task, allocating rewards, and assigning students to a particular group. The following discussion of components in this program--nature of the task, rewards, and group composition--is informed by the experimental literature on problem solving, cooperation and competition (Kelley and Thibaut, 1969).

Successful completion of the task should require relatively synchronized equal contributions from group members--this is what Thibaut and Kelley describe as a conjunctive task (1959:162-164). There is reason to believe that tasks which can be successfully completed by the response of only one student (disjunctive) are less productive of solidarity or cooperation. Secondly, cooperation in the exchange of information and use of skills is most likely to result when members of the group share equally in the outcome, whether rewarding or not. That is, rewards are interdependent; failure to cooperate diminishes each member's chance for a desirable outcome. Each student can increase his prospects for a reward by working cooperatively with other members of the group and by encouraging his partners to do likewise. The group's power over members' conduct derives in large measure from the latter's desire for acceptance.

The differential rewarding of individual members generates competition within the group and interference, and lowers group productivity when the task involves a high degree of interdependence (Miller and Hamblin, 1963). As competition within the group increases, any sharing of information or resources threatens one's competitive position. This threat is very real when the response of only one person can successfully solve the problem or complete the task. Yet even if all students in a two- or four-person group are promised corresponding outcomes on the basis of group performance, a task which can be completed by one member reduces the problem solving and learning satisfactions of the other members. This may occur, for instance, in tutorials. Instead of communicating learning strategies and explanations of concepts, the tutor may be tempted to

solve the problem himself. Frustrations in teaching can be reduced by this shortcut. In effect, this procedure could explain why some tutors gain more from their teaching experience than the students they assist (Cloward, 1967).

When all members have corresponding outcomes from group performance, the differential rewarding of individual performance can be achieved with negligible risk to cooperative relations when each student is paired in competition with a comparable student in another classroom. This procedure removes zero-sum competition from the classroom, and offers members of each pair a chance for success in each contest. Rewards for individual prominence and group success are commonplace in team athletic contests. Another approach would be to reward students for successfully exceeding the level of their previous performance. In both competitive structures--against a student from another classroom and against oneself--individual success does not limit the reward prospects of other members of the class, and can be used, moreover, as a contribution to the classroom's performance.

One of the problems in maintaining student cooperation on a common task is to avoid a situation where the rewards of such interaction fall below available gratification in other activity, i.e. working alone. The worthwhileness of joint action is especially critical when the group is formed by a third party, in this case the classroom teacher. To ensure that desirable outcomes are achieved by all students who work cooperatively on the task, regardless of the end performance of their respective group, it may be strategic to reward independently conjoint activity among students (problem solving, cooperative study sessions, etc.) and group outcomes. The initiation of cooperative activity in teaching and learning may in fact require exclusive rewarding of the interaction process. After initial contact between group members, intrinsic rewards or satisfactions will gain importance in exchange processes. These include status by association, friendship, esteem, deference, and the satisfaction of complementary needs. Although the value of these rewards is

difficult to estimate, they need to be recognized as a significant element of student interaction.

Under conditions of intergroup competition which inevitably produce group losses as well as success, two additional adjustments can be introduced to minimize the cost of a poor finish. First, the consequences of group performance may be set up to only provide a positive increment to the individual records of students in successful groups. In this arrangement, student members have everything to gain and nothing to lose in the group by working together with other members. Secondly, controls are necessary to avoid a pronounced imbalance in wins and losses across competing groups, since repeated losses are bound to have a deleterious effect on student willingness to cooperate. The demoralizing effect of a losing streak is clearly seen among athletic teams. Evenly balanced groups on criteria relevant to the task would help to reduce the likelihood of this inequality.

In order to use student differences as a basis for exchange and cooperation, students assigned to each group should at least vary on dimensions relevant to the task, such as skill and age-related experience. Across activities which require different skills, a student may find himself in an advantageous position on some and disadvantaged on others. If the task requires competence in a particular subject, student variation in this respect would offer tutorial opportunities as well as potentially high standards through the more skilled member. In a tutorial the more able youth has more to offer than his less competent partner, although the tutor could receive more than adequate compensation in esteem, friendship, and accomplishment. Motivation of the less competent student may require augmenting his total contribution to group effort in order to make it as valuable as the contributions of the other group members. This increment should also provide additional incentive for the involvement of other group members in helping or working with this student.

It is possible that neither rewards allocated by the teacher (points, certificates, material incentives, etc.) nor the intrinsic satisfactions associated with interaction will be adequate for shaping cooperative responses among some students, especially those who are highly self-oriented (Kelley and Thibaut, 1969:41). Long standing hostility between two students could make "punishing the other" a far more satisfying goal than that of working for common rewards, although the desire to be liked by other group members should minimize this kind of interchange. Knowledge of this kind of relationship would need to be taken into consideration in assigning students to groups. There is no reason to expect transactions within student groups, or within any other group for that matter, to be free of interpersonal conflicts, even when factors are conducive to harmonious cooperation. This expectation seems desirable if we concede that realistic social conflict is an impetus to growth and awareness.

The soundness of this approach to the use of student groups has not been subjected to a thorough test in educational settings, although exploratory research has been encouraging and a more elaborate test is underway. One question that needs to be answered is the relative importance or effects of the various manipulations and reinforcements. For instance, we know that effective tutorial arrangements between older and younger students have been achieved without competition and elaborate reinforcement procedures (see Lippitt and Lohman, 1965). The intrinsic rewards of helping and exchange, and the significance to classmates of involvement in a tutorial may be sufficient to maintain such relationships. If presented appropriately, the involvement of older and younger students in a tutorial could acquire the character of a privileged experience for both. We need to know the incentive value associated with the act of winning a contest between student groups, the effects of social rewards which arise out of interaction, and/the educative or relational limitations of student heterogeneity, its range and type. Conditions needed to establish a mutually satisfying

relationship between two students may vary substantially according to the size of the particular status difference. Compare, for instance a two and a six year difference in age.

We also need to think about the educative potential of interdependent tasks outside the classroom, in the work, studio, or laboratory setting (see Newman and Oliver, 1967). The precise nature of the task in these areas is apt to lack definition at the outset and gain clarity through exploration, decision making, and action. Learning becomes a by-product of collective action. Tasks which could be designed for student exchange include an investigation of a community problem, planning and organizing a one-act play, and development of visual aids. In some cases, students could be paired with adults on joint projects in the community.

At various points in the essay, I have cited barriers to student teaching. To these sources of resistance we should add the fears and beliefs of some parents. As seen in the public's reaction to current educational reforms on the college level, there is much negative sentiment among adults toward greater student involvement in responsible, decision-making roles. While caution is definitely warranted in this area, adult distrust concerning the motives and fidelity of the young (not just the radicals) is a considerable handicap for any change toward incorporating students in the activity of education. As one parent recently remarked, "I wouldn't dispute such involvement if I knew that their values were the same as mine." Added to the more or less conscious suspicion of a"take-over" is the reluctance which stems from the anticipated emotional response of parents who find out that their "gifted" child is spending much of his time helping "slow" students learn and that his outcomes or incentives are at least partially dependent on the progress of his co-partner.

Parental acceptance of student cooperation on educational tasks is likely to depend on how this program is described by the school. Rejection by parents with talented offspring is likely if the program is presented as a group arrangement which serves the public interest by aiding less able or skilled students. So described, the program clearly and incorrectly implies a one-sided exchange in which the primary sacrifice is made by the more advanced student. A more adequate protrayal of student cooperation would emphasize the age-old principle that one learns by teaching, and point out that such activity does not mean that individual excellence is not rewarded. It would characterize the effective communication of concepts or knowledge as one of the most demanding reality tests of comprehension and mastery. The feedback a child receives from teaching efforts may increase awareness of comprehension gaps, as well as strengths, and encourage him to seek a more thorough understanding of the material and its relevance for personal experience. Frustrations encountered in the task may be counterbalanced by the emotional gratifications of effective communication, friendships, and a more realistic appreciation of the role of teacher and learner in the educational process (cf. Webb and Grib, 1967).

To advocate educational exchange and teaching among students is not to favor displacement of teachers by their students nor to create a pediarchy of sorts. In fact, the teacher occupies a strategic position in establishing and directing such a program. Moreover diliberate use of the student group is only one of several instructional models which could be used at various times in classroom. But whatever the combination of models, implementation of student exchange does necessarily involve a basic revision in the premise that all teaching of any value is conducted by the adult teacher. The one-sided emphasis on organizing students to facilitate teacher performance, with its assumed benefits for student learning, is reduced by greater stress on using student resources to benefit students through exchange and teaching, permitting students

to make positive contributions through their education to the student collective.

The fundamental question raised in this essay is not whether we shall have student teaching and group life or not, since it flourishes outside the classroom. The question is whether we shall recognize the extraordinary educative value of this resource and make room for it in the classroom. Student differences in age, aptitude and performance, and socio-cultural experience represent a potentially valuable basis for student exchange, in contrast to homogeneity or similarity, and their creative use in this fashion represents a productive adaptation to student heterogeneity in comprehensive schools. Nongraded schools, with their variation in student age and aptitude, are particularly well suited for student exchange.

Considering the dubious educational merit of homogeneous grouping and its social disadvantages, I believe the time has come to give serious thought to how we can use the natural heterogeneity of comprehensive schools to interrelate and include students as active participants in the teaching process. In suggesting this perspective, I am keenly aware of the precarious stance of the curriculum reformer. To quote Daniel Bell:

> Writing a curriculum, like cooking, can be a prototype of the complete moral act. There is perfect free will. One can put in whatever one wishes, in whatever combination. Yet in order to know what one has, one has to taste the consequences. And as in all such acts, there is an ambiguity for evil, in that others who did not share in the original pleasures may have to taste the consequences. In sum, it is the moral of a cautionary tale" (1966:289).

FOOTNOTES

1. See Morris Janowitz (1969). See also Riesman's essay on alternative models in higher education (1969).

2. James Coleman's writings are a significant exception to the statement. In a relatively recent essay he notes "I have become intensely interested in the problem of what gives student cultures their character, in high schools as well as colleges. It relates to interesting problems of social theory, as well as to important practical problems of school administration. In social theory, it is related to the problem of how the environment of a social system affects its status structure; in school administration, it is part of the problem of how to create an institution that will encourage learning." (1966:262)

3. For literature reviews, see Glidewell, Kantor, Smith, and Stringer (1966) and Linkzey and Byrne (1968).

4. The early one-sided emphasis on social adjustment and assimulation as products of group activity has made suspect and proposal which advocates group participation. As Thelen points out, "the idea of group participation has frequently been associated with the ideas of conformity, manipulation, and thought control...." (1960:114).

5. According to Milton Gordon, the ideology of Anglo-conformity has as its central premise "the desirability of maintaining English institutions (as modified by the American Revolution), the English ways, and English-oriented cultural patterns as dominant and standard in American life" (1964:88).

6. The age-graded structure of public education may be partially responsible for the tendency to use peer and age-mate interchangeably. According to the

Englishes', "...to use peer to denote the age-mate, while also connoting that the age-mate is the equal of the normal associate in other respects than age, has led to false reasoning and unfortunate social and educational policy. [Also]--the idea that the group of age-mates is actually the best (or the only) peer group for a child is so obviously false that some strong bias must be assumed as the explanation for the frequency with which this is implied or even explicitly asserted" (1958:377).

7. Criticism of standardized instruction by age grades (ignores wide individual differences) and the effects of non-promotion underly the current movement toward nongraded schools, especially on the primary level. See Goodlad and Anderson (1963). For comparative assessments of student performance and experiences in a graded and nongraded elementary school, see Queeley, "Nongrading in an Urban Slum School" (1969).

8. A number of large comprehensive schools in England are using tutorial groups which include an adult teacher and students who vary in age and aptitude. In comparison to the form, "the tutorial system lays more emphasis on the need for continuity on the one hand and for heterogeneity of students on the other.--Some tutorial groups contain not only a wide ability range but also a wide age range. Children coming in the first form thus find themselves mixing with near-adults at the top of the school" (Richardson, 1967:39).

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